

August 12, 1977

Mr. N. R. Ritenour
Universal Tool and Stamping Company, Inc.
Butler, Indiana 46721

Dear Mr. Ritenour:

Re: Disposal of Metal Hydroxide Plating Sludge

This is to inform you that the DeKalb County Landfill Permit No. 17-1 is not suitable for the disposal of the above referenced waste. There are at present only six landfills in Indiana which meet the requirements for disposal of metal hydroxide sludges such as the one you described.

Enclosed you will find a list of the six landfills presently accepting hydroxide sludges. Also enclosed is a handout describing the criterion required of a sanitary landfill which wants to accept metal hydroxide sludges.

You are requested to inform our Solid Waste Management Section in writing within 30 days of the date of this letter as to where this sludge will be disposed so that an approval letter can be written.

If you have any questions regarding this matter, please contact Mr. Guinn Doyle of our Solid Waste Management Section at 317/633-0176.

Very truly yours,

David D. Lamm, Acting Chief
Solid Waste Management Section
Division of Sanitary Engineering
AC 317/633-0176

GDayhuff/cgp
Enclosures

R/16
cgp
8/11



TOOL & STAMPING CO., INC.

BUTLER, INDIANA 46721

AUG 3 3 17 PM '77

SANITARY ENGINEERING
DIVISION
STATE BOARD OF HEALTH

August 2, 1977

Indiana State Board of Health
1330 West Michigan Street
Indianapolis, IN 46206

Attn: David D. Lamm, Acting Chief
Solid Waste Management Section
Division of Sanitary Engineering

RE: Request for permit to dispose
of semi-solid waste and permit
to haul semi-solid waste

Dear Mr. Lamm:

Please accept our application for disposal and permission to haul
said waste to DeKalb Landfill, Inc.

1. Our wastes are generated: (See descriptive process attached),
then pumped through a Haviland Clarifier, and desludged
through a Barrett Centrifuge. The centrifuged sludge is
accumulated in 55-gallon pressed paper drums and retained for
five to ten days, dewatered prior to removal to landfill.
2. We pull, under normal workload, approximately one barrell per
day. This should generate approximately forty-five gallons
per day.
3. The descriptive analysis of waste is attached. (See Edglo Lab
report.)

Respectfully,

UNIVERSAL TOOL & STAMPING CO., INC.

N. R. Ritenour

NRR/sc

Attachments: 2

WASTEWATER TREATMENT SYSTEM

The following systems and procedures have been developed and are in process for the destruction of hexavalent chromium and reduction of zinc and suspended solids along with proper pH maintenance.

The parameters aimed for in regards to our effluent going to stream are as follows:

pH	6 Minimum--9 maximum
zinc	Less than 5.0 Ppm 1.6
chromium	Less than 1.0 Ppm 0.4
Suspended solids	Less than 200 Ppm 10 to 15

This is accomplished through use of an eight compartment treatment system used as follows. (Note Schematic of System attached).

COMPARTMENT NO. 1

Influent - Cleaner and acid rinses from plating machine.

- Phosphate rinses from paint process lines.
- Acidified rinses from oil treatment pits.
- Water rinses following the cyanide-free, alkaline zinc plating tank on the machine.

Chemical

treatment - Due to the chemical composition of the alkaline zinc plating system, the combination of the combined influents are in the required pH range to precipitate the zinc metal as zinc hydroxide.

The solution will flow into Compartment 2.

COMPARTMENT NO. 2

Chemical

treatment - pH will be maintained at approx. 8.5 in this compartment by means of a pH probe. Any phosphates contained in the cleaner rinses will be precipitated as calcium phosphate, any dissolved iron salts in the rinse waters following the acid pickling tank will be precipitated as ferrous-ferric hydroxides.

The supernatant solution will flow into Compartment 6.

COMPARTMENT NO. 8

Chemical Treatment - No chemical additions will be required.

The supernatant solution will combine with
Compartment 4.

COMPARTMENT NO. 4

See previous description

The supernatant solutions from Compartments
4 and 8 will be combined in this compartment.

Final settling of the various precipitates
will take place in this compartment.

The effluent from this compartment will be
in the desired discharge range.

COMPARTMENT NO. 3

Chemical Treatment - No chemical additions will be required.

The supernatant solution will flow into compartment 4 and combine with compartment 8.

COMPARTMENT NO. 4

Chemical Treatment - No chemical additions will be required.

Final settling of the various precipitates will take place in this compartment.

COMPARTMENT NO. 5

Influent - Chromate rinse waters from palting machine.

Chemical Treatment - The pH of the solution shall be maintained at a pH of 2.0 - 2.5.

Sodium bisulfite or ferrous sulfate will be added to reduce the hexavalent chromium to the trivalent form. The requirement of sulfuric acid will be controlled by a pH probe, and the requisite amount of reducing agent will be determined by oxidation-reduction potential control (ORP/Redox measuring system)

The solution will flow into Compartment 6.

COMPARTMENT NO. 6

Chemical Treatment - Caustic soda is added to neutralize the sulfuric acid and raise the pH to about 8.5. The requirement of caustic soda will be determined by a pH probe. At this point, the precipitation of chromic hydroxide, calcium sulfate, and calcium phosphate will begin. *also from the Compartment-1*

The supernatant solution will flow into Compartment 7.

COMPARTMENT NO. 7

Chemical Treatment - ~~No~~ chemical additions will be required.

Polyfloc for heavy precipitation
Any unsettled precipitates from Compartment No. 6 will have further opportunity to settle out in this compartment.

The supernatant solution will flow into Compartment 8.

FLOW RATES

Plating waste drain-- Ranges ~~20~~ to ~~25~~ gpm

20 to 25 gpm

Plant waste drain -- " ~~2~~ to ~~4~~ gpm

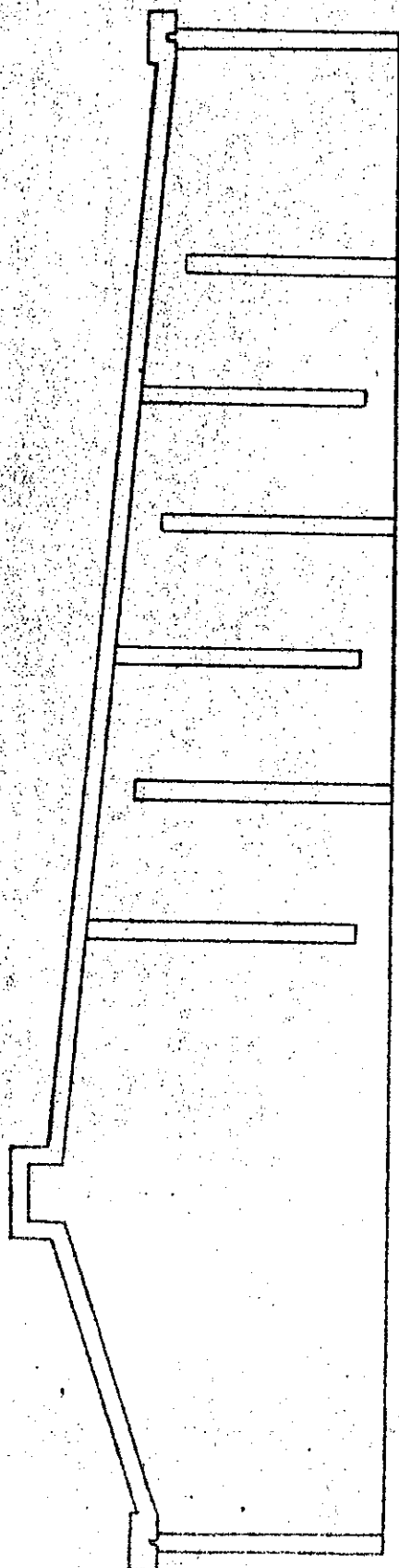
5 to 7 gpm

Chromium waste drain " ~~15~~ to ~~17~~ gpm

8 to 12 gpm

RETENTION TIMES

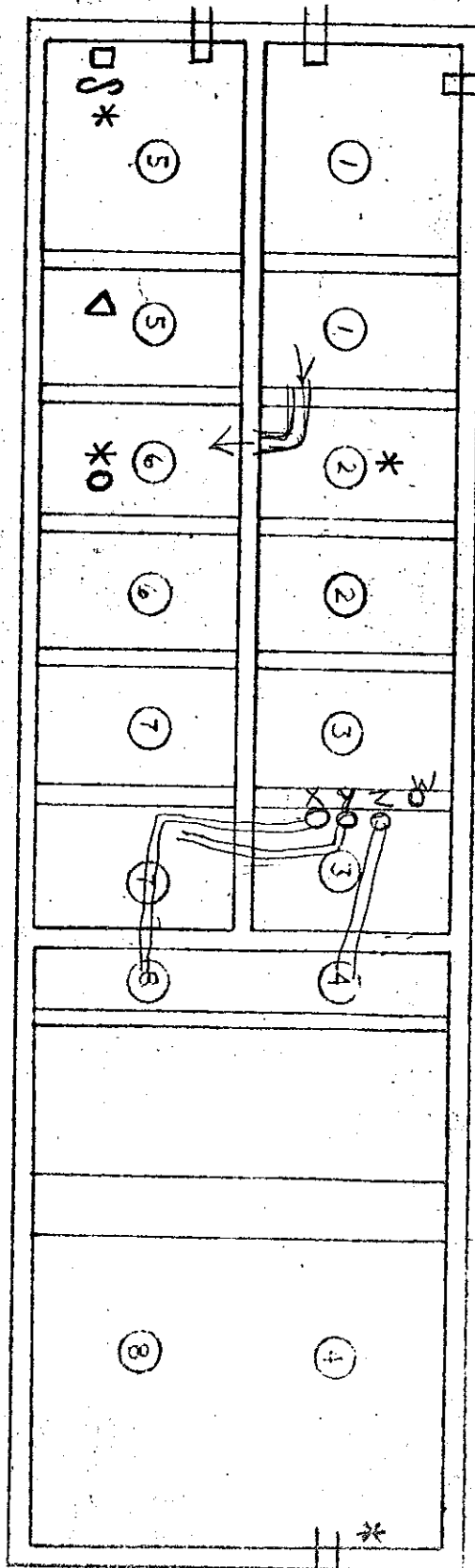
Compartment 1	1.9 hrs.
2	1.3 hrs.
3	1.3 hrs.
5	3.2 hrs
6	2.1 hrs
7	2.1 hrs
4--8	5.1 hrs



CHROMIUM
WASTE

PLATING
WASTE

PLANT WASTE



TANK 1- 3300 GAL.

" 2- 2200

" 3- 2200

" 5- 3300

" 6- 2200

" 7- 2200

" 4- 8- 14000

LEGEND

* pH PROBE

Δ ORP

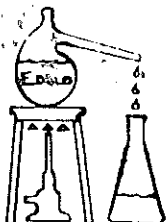
○ CAUSTIC INPUT

□ SULFURIC ACID INPUT

○ SODIUM BISULFITE OR Ferrous Sulfate INPUT

X } Pick up
Y } station
Z } for sludge
W } dewatering
Clarifuge
System

DISCHARGE
TO STREAM



Edglo

LABORATORIES INC.

2107 E. WASHINGTON BLVD.

FORT WAYNE, INDIANA 46803

Phone (219) 422-8477

DATE RECEIVED 7/20/77

DATE REPORTED 7/26/77

RECEIVED FROM:

TYPE SAMPLE Sludge, 7/20/77

Universal Tool & Stamping Co., Inc.
Box 100
Butler, Indiana 46721

LAB REPORT NO. 003

ATTN: Mr. Tarry Patel, Enviro. Engr.

PARAMETER	CONCENTRATION	TYPE SAMPLE	METHOD OF ANALYSIS
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Analysis of submitted sludge is as follows:

pH	7.45	Sludge viscosity is high, and may be	
Solids	13.34 %	compared to that of pitch or tooth-	
Water	86.66 %	paste. Substance will pour slowly.	

Solids Portion Analysis: (Dry Basis) (% by weight)

Aluminum (III)	0.003 %	PPM = 30ppm
Cadmium (II)	0.003 %	30
Copper (II)	0.096 %	960
Chromium (III)	21.310 %	213100
Iron (III)	4.362 %	43620
Lead (II)	0.026 %	260
Manganese (II)	0.031 %	310
Nickel (II)	0.017 %	170
Zinc (II)	47.033 %	470330
Calcium (II)	3.442 %	34420

REMARKS: Magnesium (II) 10.169 % 101690

Acid Insolubles, 13.508 %
Anions, Etc.

100.000 %

RESPECTFULLY SUBMITTED
EDGLO LABS INC.

By

EDWARD GUINDON

July 13, 1977

Mr. N. R. Ritenour
Universal Tool and Stamping Company
P. O. Box 100
Butler, Indiana 46721

Dear Mr. Ritenour:

Re: Procedure for Approval for
Land Disposal of Hazardous Wastes

Following your phone conversation with Mr. Guinn Doyle of the Solid Waste Management Section, this letter is written to describe the procedure to obtain approval for land disposal of toxic and hazardous wastes in Indiana. Each hazardous waste is handled on a case-by-case basis by the Solid Waste Section in conjunction with the Industrial Waste Section, also of this Board. We have emphasized the recycling and/or recovery of hazardous waste when possible. Incineration is also a means of disposal available for several hazardous wastes, in fact the only satisfactory means for certain wastes. Only when these other means of handling hazardous wastes are not feasible, do we approve land disposal. Each waste is thoroughly researched before approval is granted from this office.

For each hazardous waste proposed for disposal at an approved sanitary landfill, a written request for approval must be submitted to the Solid Waste Management Section for consideration. The request must include an analysis of the chemical constituents in the waste, both qualitative and quantitative, and the physical characteristics of the material, including per cent solids and viscosity. The request must also describe the process involved in the generation of the waste, the proposed disposal area, and the waste hauler. The amount of waste per unit of time (e.g., gallons per day, cubic yards per month, etc.) must also be submitted.

The staff of the Solid Waste Management Section will review the information submitted and determine, first of all, whether the waste is suited for land disposal and then what disposal method should be used. If the operator has an idea of what method he wishes to use for

disposal of a particular waste, that information should also be submitted. If a hazardous waste is approved for land disposal, a letter will be sent to the generator, the hauler, and the landfill operator granting approval for disposal, and describing how the waste should be disposed. Until such a letter is received, the waste cannot be disposed of at a landfill.

Please find enclosed copies of Regulation SPC-17 and 18, which are involved with toxic and hazardous waste hauling and disposal. If you have any questions, please contact Mr. Guinn Doyle of the Solid Waste Management Section for further assistance at AC 317/633-0198.

Very truly yours,

David D. Lamm, Acting Chief
Solid Waste Management Section
Division of Sanitary Engineering
AC 317/633-0176

GD/kmd
Enclosures

JMH
Industry File
Universal Tool

October 14, 1977

Mr. N. R. Ritenour
Universal Tool and Stamping Company, Inc.
P.O. Box 100
Butler, Indiana 46721

Dear Mr. Ritenour:

Re: Increased Generation Rate of
Metal Hydroxide Sludge

This will acknowledge receipt of your letter dated September 29, 1977, concerning the above-referenced subject.

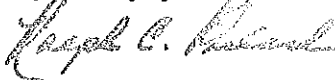
You are hereby granted approval for the disposal of 960 gallons per week of metal hydroxide sludge at the Adams Center Landfill, #2-1, Allen County. This material was previously approved by letter dated September 7, 1977, for a generation rate of 320 gallons per week.

It is understood that a more intensive dewatering program is going to be implemented to reduce the volume generated for disposal. The approval will be re-evaluated in three months to determine your progress in obtaining additional dewatering capability.

This waste is to be disposed of in an area separate from the refuse and covered at the end of the working day. This approval may be revoked if the landfill site does not remain in compliance with Regulation SPC-18. All necessary local approvals must be obtained prior to disposal.

If you have any questions, please contact Mr. Bruce Palin of the Solid Waste Management Section at AC 317/633-0176.

Very truly yours,


Ralph C. Pickard
Acting Technical Secretary

BHPalin/vme

cc: Fort Wayne-Allen County Health Department
Adams Center Landfill

bcc: Jim Hunt, WPC ✓

Jim Hunt

File

Universal Tool

September 7, 1977

Mr. N. R. Ritenour
Universal Tool
and Stamping Company, Inc.
Box 67
Butler, Indiana 46721

Dear Mr. Ritenour:

Re: Disposal of Metal Hydroxide
Plating Sludge

This will acknowledge receipt of your letter dated August 23, 1977, concerning the above-referenced subject.

You are hereby granted approval to dispose of approximately 320 gallons per week of metal hydroxide sludge at the Adams Center Landfill, #2-1, Allen County.

This waste should be disposed of in an area separate from the refuse and covered at the end of the working day. This material should not be disposed of during inclement weather. Any necessary local approval must be obtained from the Fort Wayne-Allen County Health Department.

If you have any questions, please contact Mr. Guinn Doyle of the Solid Waste Management Section at 317/633-0176.

Very truly yours,

Oral H. Hert

Oral H. Hert
Technical Secretary

BHPalin/jmt
cc: Fort Wayne-Allen County
Health Department
Adams Center Landfill

bcc: Jim Hunt ✓